

From: [PETERSON Jenn L](#)
To: [Eric Blischke/R10/USEPA/US@EPA](#)
Subject: RE: Food Web Model Performance Evaluation
Date: 07/30/2008 01:52 PM

Previous Comment:

Instead of Table 3-7 presenting “calibrated values” for weight, lipid content, etc. for each species, it should be presenting a rigorous evaluation of how well the model outcomes match tissue observations in the harbor. In order to evaluate how well the model outcomes match the observations, Gobas uses the mean model bias MB to express the central tendency of the model. MB is the geometric mean (assuming a log-normal distribution) of the ratio of predicted and observed concentrations. The LWG includes a similar equation on page 13, which appears to not use a log-normal distribution, and does not appear to use information from a number of observations from each species (it looks like one average is used).

Where $CP_{i,j}$ and $CO_{i,j}$ are the concentrations of the chemical in a particular species that are respectively predicted by the model and observed in the field and i can refer to the number of observations (i.e. for a particular chemical in a particular species), number of chemicals (in a particular species) or a number of species (for a particular substance).

****In the calculations of MB, over-and under predictions have a tendency to cancel out, and therefore it describes the central tendency of the model outcome. Variability in the over- and under-estimation of measured values should be represented by the 95% confidence interval of MB. This is something that should be added to the LWG analysis.**

See also Pages 11-17 in fax for more information, but esp. page 13 for the equations. I am faxing because I can't readily transpose the equations into e-mail format. I can photocopy the whole thing and pass it on at the next meeting if you would be interested. Good information...

-Jennifer

-----Original Message-----

From: Blischke.Eric@epamail.epa.gov [<mailto:Blischke.Eric@epamail.epa.gov>]
Sent: Wednesday, July 30, 2008 1:13 PM
To: PETERSON Jenn L
Subject: Food Web Model Performance Evaluation

This is the thing that I could not remember at the end of the TCT. You were going to explain the difference between what the LWG did and what you recommend.

Eric